

A CONTRIBUTION TO THE ORNITHOLOGY OF THE RISHI GANGA VALLEY AND THE NANDA DEVI SANCTUARY

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(With two text-figures)

The Nanda Devi Sanctuary, Garhwal Himalaya, Uttar Pradesh was visited by a party from Cambridge University June-August 1977. Observations were made of the birds around Joshimath, on the trek to and from the Sanctuary & within the Sanctuary. Details are given for the vegetation and birds of the area. 93 species were seen; some are new records for the area, some are extensions beyond documented altitudinal ranges.

The Rishi Ganga is a tributary of the Dhaul Ganga, draining the Nanda Devi sanctuary area of the Garhwal Himalaya (Fig. 1). The river, which has cut a gorge several thousand feet in depth, is rarely visited: the only visitors being international climbing expeditions which pass through the gorge to reach their base camps. So far no details have been published on either the fauna or flora of the area, except Lavkumar's observations around Joshimath (Lavkumar 1956).³ The present paper is an attempt to partially remedy this state of affairs by detailing the birds seen in the Sanctuary, on the walks in and out, and for the short period spent in the town of Joshimath prior to the visit to the Sanctuary.

The Sanctuary (Fig. 2), a high level, mountain girt, basin at 13,000-14,000 feet is reached by a nine day trek starting from Lata vil-

lage. The trek crosses several small ranges thereby avoiding the very difficult section of the lower Gorge. The path eastwards into the basin passes through a variety of vegetation types.

Above Lata village oak changes quickly into a mixture of deodar and blue pine, the only open areas being clearings fired for grazing. The path from Belta Karak to Lata Karak involves a rapid ascent through lichen draped deodar and pine. From this stage onward undergrowth is typically sparse or absent, shrubs only found where soils are either too shallow or unstable for tree growth. The forest then changes to a dense rhododendron forest by 12,000 feet, which itself gives way to alpine meadows. The meadows are dominated by the colourful annuals of the Rosaceae family.

The meadows pass quickly into montane grassland with tufted grasses, lichens and squat evergreen shrubs. The grasslands are grazed as far as Dibrugeta by summer flocks from Lata village. In this high area, with passes at 15,000 feet, there are few birds to be seen except for an occasional Impeyan pheasant *Lophophorus impejanus*, wren *Troglodytes*

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³ Some more data on the fauna has been procured by Mr. Lavkumar during his WWF-sponsored reconnaissance of the Nanda Devi Sanctuary in May-June 1977.

UPPER GARHWAL adapted from Lavkumar(1956)

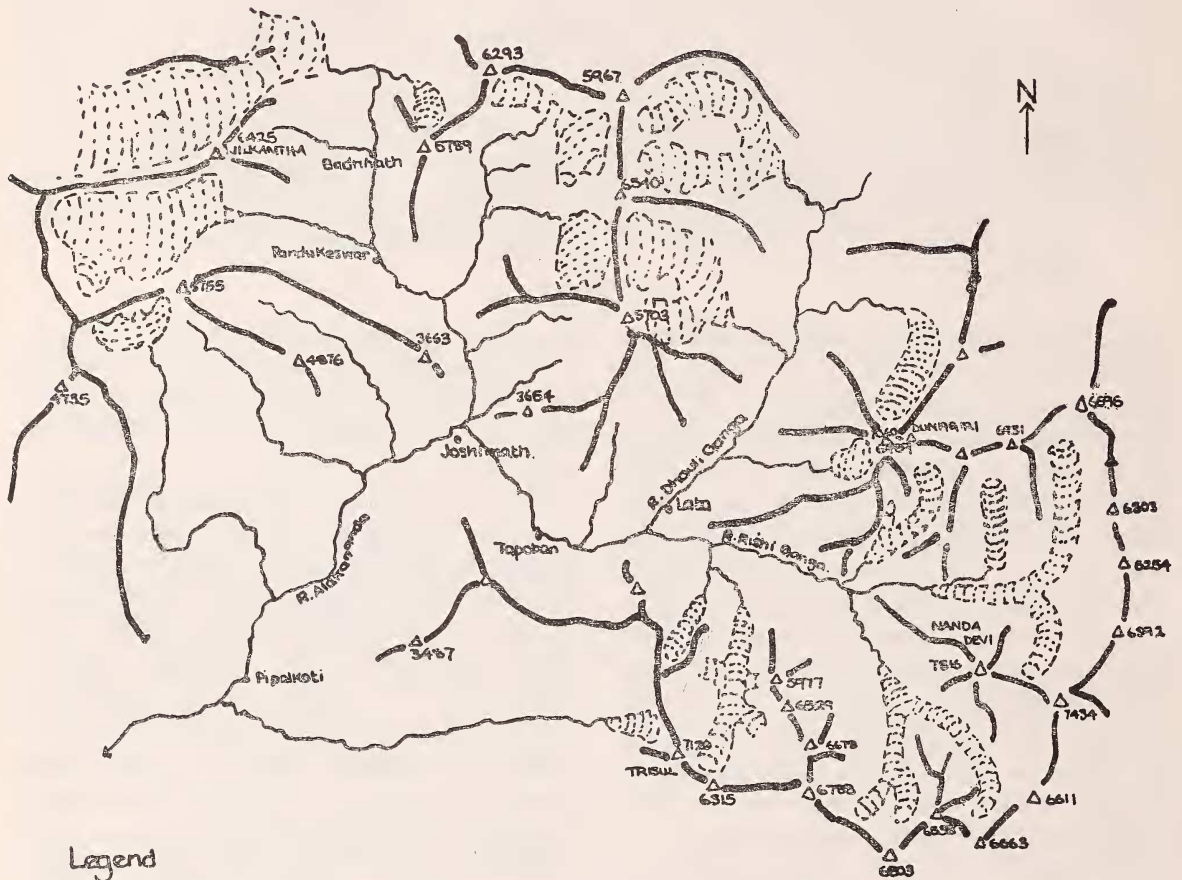


Fig. 1. Nanda Devi sanctuary area of the Garhwal Himalaya.

troglodytes or pipit *Anthus* spp.

A rapid descent from the mountain ridge passes through a zone of alpine flowers, then a belt of scrub and birch *Betula utilis* before returning to the wet forest surrounding the camp of Dibrugheta. The forest here is slightly drier than on the other side of the range, a trend that continues into the Gorge and Sanctuary. This desiccation is progressive, since, as more and more obstacles bar the way that main monsoon winds are quickly drained of much of their load. By the time the monsoon winds reach the Sanctuary the rain is light and in small amount compared to the start of the trek.

From Dibrugheta the path to Deodi climbs back up to the grassland, undulating up and down before finally returning to the coniferous forest. It is noticeable that deciduous trees dominate only the ravines and their immediate surrounds, conifers dominating all other areas below the tree line.

The walk to Ramani is through an admix of rhododendron and birch before returning to pines which dominate beyond the Trisul river, only reverting to birch on the outskirts of the camp area. Beyond Ramani there is little or no tree cover, what there is mainly birch in the base of the gorge, along its tributaries or in inaccessible clefts. The dominant vegetation slowly changes to a sparse cover of montane grasses and squat *Ericaceae*. Only towards the margins of the Sanctuary does scrub juniper *Juniper communis* appear and quickly becomes the dominant cover. By the time the Sanctuary is reached, at the confluence of the Rishi Gangas, the soil is noticeably dry with aromatic herbs present in large numbers for the first time. The two branches of the Rishi Ganga are very similar. In each there is a dominant juniper cover which gives

way altitudinally to grasses, prone mosses and lichens, and on riverine soils to annual herbs and dwarf willow *Salix* spp. Both valleys are blocked by glaciers. The woody vegetation extends along the sides beyond the tongue of the glacier before changing slowly to squat alpine and finally to lichens.

The observations listed below were made by members of the Cambridge Garhwal Himalaya expedition in the period early July to late August 1977. Due to pressure of time, and the vagaries of the monsoon, observations on the walks in and out of the Sanctuary were rather brief. By far the largest period of observation was carried out in the Base Camp valley (North Rishi Ganga) and on the slopes of the surrounding peaks.

The valley is surprisingly rich in birds; 43 species being identified, with many of these close to or beyond documented altitudinal limits. The major stronghold is the scrub juniper. In the juniper were warblers *Phylloscopus* spp., Rubythroats *Erithacus pectoralis*, Grosbeaks *Mycerobas* spp., Redstarts *Phoenicurus* spp., and Rose Finches. The other main habitats used by birds were scrub willow and areas of grass and rock debris.

A number of species were observed breeding until the second week of August when there were great numbers of fledglings about. The first movements out of the valley were taking place by the third week of August. During this period several species, previously absent were observed moving down-valley, being first observed high up on the mountain sides and on the glacier margins. Species such as the hoopoe *Upupa epops* and warblers had presumably come over the adjacent divide from Tibet before descending down the Rishi Ganga en route to lowland wintering quarters.

THE NANDA DEVI SANCTUARY & RISHI GORGE

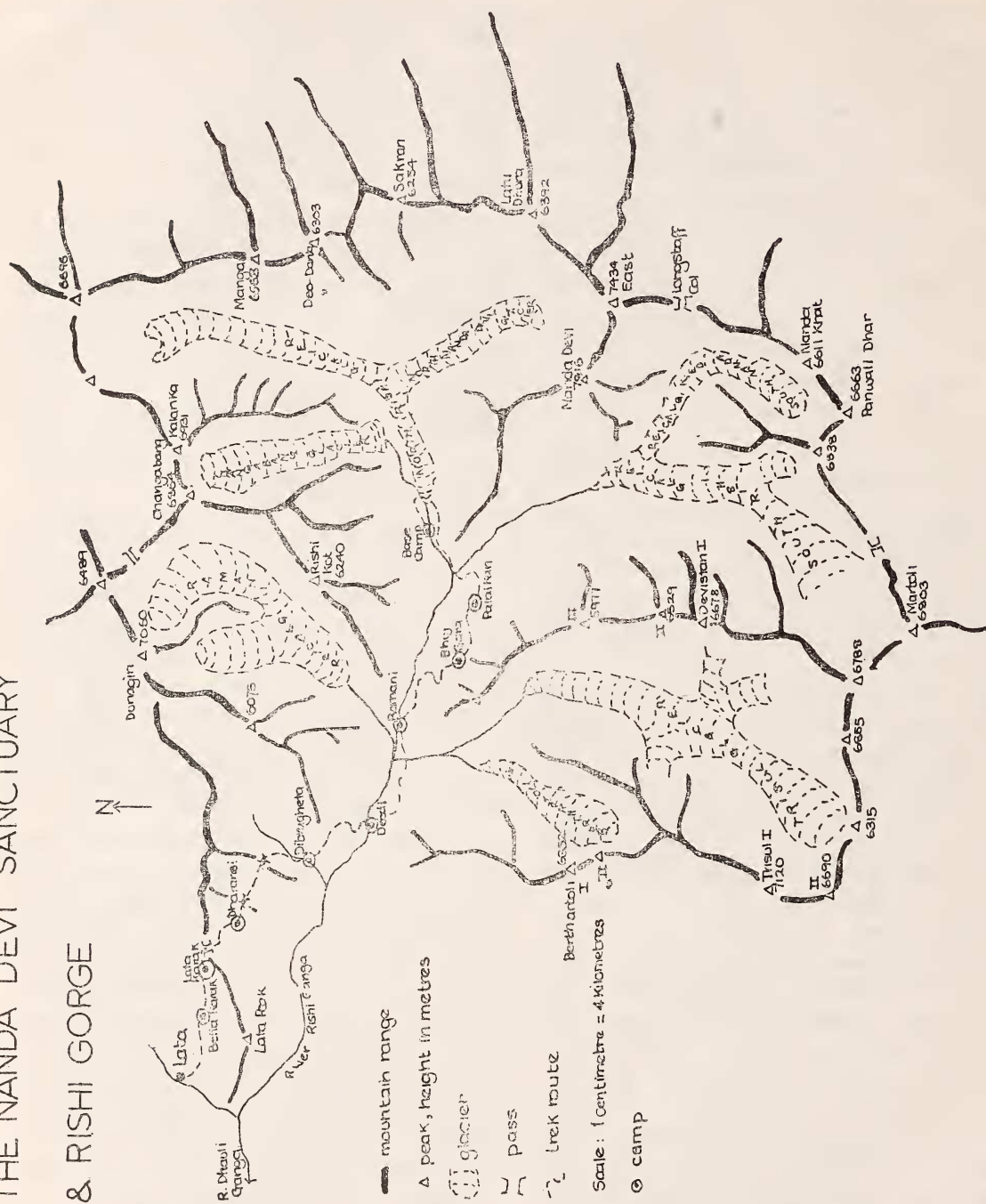


Fig. 2. The Nanda Devi Sanctuary and Rishi Gorge.

LIST

Anser spp. Geese. A skein seen flying at about 24,000 feet near a col on Nanda Devi.

Milvus migrans Black Kite. Several seen in the vicinity of Joshimath. Very infrequent compared to Lavkumar's notes 1956.

Aquila chrysaetos Golden Eagle. A single adult above Lata village. Two further adults seen in the Sanctuary at Patalkan (15,400 feet). A single bird observed near the Changbang base camp. An adult was mobbed by 150 chough *Pyrrhocorax* spp. on the bluffs above base camp.

Aquila nipalensis Steppe Eagle. A single bird circling just above the forest margins at Joshimath.

Aegypius monachus Black Vulture. A pair circling in the valley between Bhuj Gara and Ramani.

Gyps himalayensis Himalayan Griffon Vulture. Common on thermals above Joshimath. Adults and juveniles seen together below the town. Several on most days above base camp, occasionally mobbed by Redbilled chough *Pyrrhocorax pyrrhocorax*.

Gyps bengalensis Whitebacked Vulture. A single bird above Joshimath.

Neophron percnopterus Egyptian Vulture. Four to five adults and juveniles were commonly seen flying the length of the Joshimath valley.

Gypaetus barbatus Lammergeier or Bearded Vulture. Up to three seen together in the Base camp valley, with one occasion of two adults and a juvenile flying along the bluff-line. An adult bird was observed 'bone dropping' for a period of fifteen minutes. The bird carried a pelvic bone aloft, circled, dropped the bone from a height of 300 feet then swung down to collect the bone before repeating the performance. The pro-

cess was carried out five times before the bone was sufficiently fractured. Before each drop the bird completed an average of two circles to gain sufficient height.

Falco peregrinus Peregrine Falcon. A single bird stooping on a finch in the valley below Lata village.

Falco tinnunculus Kestrel. Up to two in the Base camp valley. On one occasion a single bird mobbed by ten chough. Also seen at Joshimath.

Lerwa lerwa Snow Partridge. A single bird at 15,500 feet in Base Camp valley giving an alarm call.

Tetraogallus tibetanus Tibetan Snow Cock. An adult and four fledglings at 16,500 feet.

Lophophorus impejanus Impeyan pheasant. Three flew from cliffs near Lata Karak, calling vociferously as they descended.

Lophura leucomelana Kalji Pheasant. A pair in the forest near Belta Karak.

Columba leuconota Snow Pigeon. Several pairs in the Base Camp valley. Birds commonly seen in ones or twos. One individual roosted for most of the day on a river cliff.

Columba rupestris Hill Pigeon. Two seen, one of which was crossing a mountain ridge at 17,000 feet.

Columba livia Blue Rock Pigeon. Single birds seen flying in the lower Rishi Gorge. Not noted beyond Deodi. Absent in the Joshimath region.

Collocalia brevirostris Edible-nest Swiftlet. A single bird above the forest at Joshimath.

Upupa epops Hoopoe. A single carrying food at Joshimath. Not noted in the Sanctuary until the end of August, when numbers were seen descending the valley, being noted first high on the mountains above the glacier line. They had probably crossed the mountain range from Tibet.

Picoides macei Fulvousbreasted Pied Woodpecker. Three on a dead tree in mixed forest above Joshimath.

Delichon urbica House martin. Small flocks of up to 20 around cliffs at 15,000 feet on August 1. Three broods on overhanging cliff face at Bhuj Gara being fed on August 26.

Lanius schach Rufousbacked shrike. A single bird on telegraph lines at Joshimath and one between Lata and Joshimath.

Oriolus oriolus Golden Oriole. A single male on a wall at 7,000 feet.

Oriolus traillii Maroon Oriole. In forests near Belta.

Acridotheres tristis Common Myna. Common in Joshimath but few compared to lower altitudes. A single bird mobbed a kestrel at Joshimath.

Pyrhcorax pyrrhcorax Redbilled Chough & **P. graculus** Yellowbilled Chough. First seen in the Rishi Gorge at Ramani. Found singly or in flocks in the Sanctuary. Flocks built up from the single numbers of the early morning into flocks of up to 150 by late afternoon. 'Play parties' were usually mixed and led by *P. pyrrhcorax*.

Corvus macrorhynchos Jungle Crow. Many in and around Joshimath wheeling in thermals. Also in the fields around Lata.

Corvus corone Carrion Crow. A pair above the alpine meadow flying towards a cliffline at Dibrugheta.

Corvus corax Raven. Single bird around Joshimath and Lata.

Pericrocotus ethologus Longtailed Minivet. Several in a mixed flock of minivets in the forest above Joshimath. Also seen above Lata and near Deodi.

Pericrocotus solaris Yellowthroated Minivet. Several in a mixed flock above Joshimath.

Pericrocotus roseus Rosy Minivet. Several in a mixed flock above Joshimath.

Pycnonotus leucogenys Whitecheeked Bulbul. In open scrub in a clearing in the forest above Joshimath and in scrub between Lata and Joshimath.

Hypsipetes madagascariensis Gray Bulbul. A single bird on telegraph lines in Joshimath.

Heterophasia capistrata Blackcapped Sibia. A single bird followed by a party of Sibilas in the forest above Joshimath.

Muscicapa latirostris Brown Flycatcher. A single bird was caught during ringing work in the Base Camp valley.

Muscicapa westermanni Little Pied Flycatcher. A single male in the forest above Joshimath.

Muscicapa thalassina Verditer Flycatcher. A pair on the forest margins at Joshimath.

Rhipidura hypoxantha Yellowbellied Fantail Flycatcher. A pair in pine trees above Dibrugheta camp.

Rhipidura albicollis Whitethroated Fantail Flycatcher. A single bird near Deodi in pine forest.

Phylloscopus affinis Tickell's Leaf Warbler. Present and nesting in good numbers in the Sanctuary in July and August. Nests predominantly in scrub juniper, dwarf spiked shrubs or occasionally in willow. A single bird was caught and ringed. It raised a brood of four from a nest in a bush two feet above the ground. First movements out of the valley began in the second week of August when there were large numbers of juveniles being fed.

Phylloscopus fulgiventor Smoky Leaf Warbler. Two seen in the Base Camp valley in river side scrub.

Phylloscopus trochiloides Greenish warbler. Seen moving down the Sanctuary in mixed warbler flocks in the third week of August.

Abroscopus superciliaris Yellowbellied warbler. A single bird in the forest above Joshimath.

- Regulus regulus** Goldcrest. In pine and birch forest between Deodi and Ramani at 12,000 feet.
- Erithacus pectoralis** Himalayan Rubythroat. Two pairs in the Base Camp valley. Immature birds seen being fed in the third week of August.
- Erithacus chrysaeus** Golden Bush Robin. Seen in scrub at Dibrugheta.
- Phoenicurus caeruleocephalus** Bluefronted Redstart. Two pairs in the area of burnt juniper scrub near the expedition base camp, with a further pair towards the glacier margins.
- Phoenicurus ochruros** Black Redstart. Two pairs seen in the Base Camp valley. One nest found in a tributary ravine. Also a pair observed feeding young on the moraine near the snout of Changabang glacier.
- Phoenicurus erythrogaster** Gldenstdt's Redstart. A male on scree near Changabang moraine.
- Chaimarrornis leucocephalus** Whitecapped Redstart. Common on all running water above 8,000 feet. Two to three pairs in the Base Camp valley with distinct territorial battles. A nest found 18 feet above the river overhung by grass, and made of dead grass and sedges. Both parents, attended the nest, the male being the more regular of the two.
- Rhyacornis fuliginosus** Plumbeous Redstart. A male and female on a moraine by the North Rishi Glacier.
- Enicurus scouleri** Little Forktail. A single bird on boulders in a ravine near Deodi, standing bobbing its tail.
- Enicurus maculatus** Spotted Forktail. Single birds at Belta, Deodi and Dibrugheta.
- Sexicota torquata** Stone Chat. Several in scrubby vegetation on the outskirts of Joshimath.
- Monticola rufiventris** Chestnutbellied Rock Thrush. A pair in oak forest above Joshimath.
- Monticola solitarius** Blue Rock Thrush. Single birds in a field outside Joshimath and in the Sanctuary at 16,000 feet.
- Myiophonus caeruleus** Whistling thrush. On most streams. Commonly seen from Ramani upwards. Song heard from high above the river.
- Turdus boulboul** Greywinged Blackbird. A pair feeding young in a nest in a rock cleft in scrub on the forest margins above Joshimath.
- Turdus merula** Blackbird. A single male sitting on a bush near Lata.
- Troglodytes troglodytes** Wren. Common in scree areas, on cliffs and crags up to 16,000 feet. Much darker than the European form.
- Cinclus pallasii** Brown Dipper. Seen on the Trisul and North Rishi Ganga rivers. Also noted on a braided section of the Changabang outwash river.
- Prunella collaris** Alpine Accentor. On bare rocks above the tree line at Dibrugheta. Also a single bird on scree above the base camp.
- Prunella strophiatea** Rufousbreasted Accentor. Two singles seen hopping amongst rocks and herbs on a damp riverside fan in the Base Camp valley.
- Prunella atrogularis** Blackthroated Accentor. Two in field near Lata.
- Prunella immaculata** Maroonbacked Accentor. Single birds in fields near Joshimath.
- Parus monticolus** Greenbacked Tit. Seen in Single bird in fields near Joshimath.
- Parus ater** Coal Tit. In forest above Joshimath and in a mixed flock at Lata Karak. Also one in pines at 13,000 ft in the Gorge.
- Parus rufonuchalis** Simla Black Tit. In conifers at Dibrugheta.

- Parus modestus** Yellowbrowed Tit. In forest above Joshimath.
- Tichodroma muraria** Wall Creeper. Several seen in the Base Camp valley either on river cliffs or feeding on high turf and scree fields.
- Certhia familiaris** Northern Tree Creeper. Single birds seen in the oak and pine forest above Joshimath and at 13,000 feet in the Gorge.
- Certhia himalayana** Himalayan Tree Creeper. A single bird in the forest at 8250 feet.
- Anthus hodgsoni** Hodgson's Tree Pipit. In low vegetation in the Base Camp valley.
- Anthus sylvanus** Upland Pipit. Several seen at 13-14,000 feet working over morainic vegetation.
- Anthus roseatus** Rosebreasted Pipit. Adult observed feeding a fledgling near base camp.
- Motacilla alba** Pied Wagtail. One or two occasionally seen in the vicinity of the glacier snout.
- Passer domesticus** House Sparrow. Common around buildings in Joshimath.
- Mycerobas affinis** Allied Grosbeak. A single male working through low forest cover in the forest above Joshimath.
- Mycerobas carnipes** Whitewinged Grosbeak. Occasionally seen in the Base Camp valley. A pair observed feeding in juniper scrub at 14,500 feet was joined by a further bird. Single males and females seen foraging at lower heights.
- Carduelis spinoides** Himalayan Goldfinch. Common in fields and gardens around Joshimath.
- Acanthis flavirostris** Tibetan Twite. Single birds seen in and around base camp.
- Leucosticte nemoricola** Hodgson's Mountain Finch. Single birds seen in a ravine in the Base camp valley on two separate occasions, flitting from rock to rock and ledge to ledge, with a further pair in the vicinity of the Changabang Base Camp.
- Carpodacus erythrinus** Common Rosefinch. Pairs seen frequently in the valley.
- Carpodacus nipalensis** Nepal Rosefinch. Pair in junipers at 14,000 feet.
- Carpodacus rubicilloides** Eastern Great Rosefinch. A male and also a pair seen infrequently in the valley.
- Carpodacus puniceus** Redbreasted Rosefinch. Male observed in juniper and on rhubarb plants.
- Propyrrhula subhimachala** Juniper Finch. Two pairs seen near base camp with the males frequently observed disputing territory from juniper or willow song posts.
- Emberiza cia** Rock Bunting. Several pairs in the valley. Secretive but approached close to the camp. Also noted at Deodi and Di-brugheta.
- Emberiza fucata** Greyheaded Bunting. A male was seen for a ten minute period in fields outside Joshimath and flushed several times. A male was also observed in a bush on a field boundary at Lata.
- Melophus lathamii** Crested Bunting. Several seen at Deodi.

REFERENCE

- LAVKUMAR, K. S. (1956): A contribution to the ornithology of Garhwal. *J. Bombay nat. Hist. Soc.* 53 (3) 315-29.